

Section II-iii-N

Highly Erodible Land

General

The basis for identifying highly erodible land is the erodibility index of a soil map unit. The erodibility index of a soil is determined by dividing the potential erodibility for each soil by the soil loss tolerance (T) value established for the soil. The T value represents the maximum annual rate of soil erosion that could take place without causing a decline in long-term productivity. A soil map unit with an erodibility index of 8 or more is a highly erodible soil map unit.

Water Erosion

Potential erodibility for sheet and rill erosion is estimated by multiplying the following factors of the Universal Soil Loss Equation (USLE):

1. Rainfall and runoff factor (R)
2. Susceptibility of the soil to water erosion (K)
3. Combined effects of slope length and steepness (LS)

The erodibility index for sheet and rill erosion is represented by the formula $RKLS/T$. A soil map unit is highly erodible if the LS factor for the shortest length and minimum percent of slope is used and the $RKLS/T$ value equals or exceeds 8.

A soil map unit is potentially highly erodible if: (1) the $RKLS/T$ value using the minimum LS factor is less than 8 and (2) the $RKLS/T$ value using the maximum LS factor is equal to or greater than 8.

Wind Erosion

Potential erodibility from wind erosion is estimated by multiplying the following factors of the Wind Erosion Equation (WEQ).

1. Climatic characterization of windspeed and surface soil moisture (C)
2. The susceptibility of the soil to wind erosion (I)

The erodibility index for wind erosion is represented by the formula CI/T . A soil map unit is highly erodible if the CI/T value equals or exceeds 8.

Highly Erodible Soils

When surface vegetation is removed from large areas of land, soil erosion often results. Sediment, the result of erosion, has a number of adverse effects as a pollutant. In suspension it reduces the amount of sunlight available to aquatic plants, covers fish spawning areas and food supplies and clogs gills of fish. Phosphorus moves into receiving waters attached to soil particles. Excessive quantities can cause algae blooms. Sediment fills drainage ditches, road ditches and stream channels and shortens the life of reservoirs.

Highly erodible soils are those soils that have a potential to erode at a rate far greater than what is considered tolerable soil loss. The potential erodibility of a soil takes into consideration a) rainfall and runoff, b) the susceptibility of the soil to erosion and c) the combined effects of slope length and steepness. A highly erodible soil has a potential erodibility that would cause a considerable decline in long term productivity of that soil as well as possible negative effects on water quality.

HIGHLY ERODIBLE SOILS IN HANCOCK COUNTY AREA

The information in this table indicates the dominant soil condition but does not eliminate the need for onsite investigation. This list of HEL soils is a frozen list as of 1987)

<u>Field Symbol</u>	<u>Map Unit Name</u>	<u>Publication Symbol</u>
9RE	SCHOODIC-ROCK OUTCROP COMPLEX, 15-65% SLOPES	SfE
10E	COLTON GRAVELLY SANDY LOAM, 15-45% SLOPES	CoE
20E	COLTON GRAVELLY SANDY LOAM, 15-45% SLOPES	CoE
22E	COLTON GRAVELLY SANDY LOAM, 15-45% SLOPES	CoE
30D	BUXTON SILT LOAM, 15-30% SLOPES, ERODED	BwD
30D2	BUXTON SILT LOAM, 15-30% SLOPES, ERODED	BwD
30E2	BUXTON SILT LOAM, 15-30% SLOPES, ERODED	BwD
32D	BUXTON SILT LOAM, 15-30% SLOPES, ERODED	BwD
32D2	BUXTON SILT LOAM, 15-30% SLOPES, ERODED	BwD
41E	LYMAN-SCHOODIC COMPLEX, 15-45% SLOPES, VERY STONY	LsE
42D	MARLOW FINE SANDY LOAM, 15-25% SLOPES	MaD
42E	MARLOW FINE SANDY LOAM, 15-25% SLOPES	MaD
43D	MARLOW FINE SANDY LOAM, 15-45% SLOPES, VERY STONY	MbE
43E	MARLOW FINE SANDY LOAM, 15-45% SLOPES, VERY STONY	MbE
47D	MARLOW FINE SANDY LOAM, 15-45% SLOPES, EXTREMELY BOULDERY	McE
47E	MARLOW FINE SANDY LOAM, 15-45% SLOPES, EXTREMELY BOULDERY	McE
50D	TUNBRIDGE-LYMAN COMPLEX, 8-15% SLOPES	TuC
51E	LYMAN-SCHOODIC COMPLEX, 15-45% SLOPES, VERY STONY	LsE
52D	HERMON-MONADNOCK COMPLEX, 8-15% SLOPES	HmC
53E	HERMON-MONADNOCK COMPLEX, 15-45% SLOPES, VERY STONY	HtE
53VE	MONADNOCK-HERMON COMPLEX, 15-45% SLOPES, EXTREMELY BOULDERY	MhE
61E	LYMAN-SCHOODIC COMPLEX, 15-45% SLOPES, VERY STONY	LsE
63E	LYMAN-SCHOODIC COMPLEX, 15-45% SLOPES, VERY STONY	LsE

65D	MARLOW FINE SANDY LOAM, 15-45% SLOPES, VERY STONY	MbE
<u>Field Symbol</u>	<u>Map Unit Name</u>	<u>Publication Symbol</u>
68C	NICHOLVILLE VERY FINE SANDY LOAM, 8-15% SLOPES	NoC
220E	COLTON-ADAMS ASSOC., STEEP	CRE
420D	MARLOW-DIXFIELD ASSOC., STRONGLY SLOPING, VERY STONY	MDC
421D	MARLOW-DIXFIELD ASSOC., STEEP, VERY STONY	MDE
421E	MARLOW-DIXFIELD ASSOCC., STEEP, VERY STONY	MDE
431D	MARLOW-DIXFIELD ASSOC., STEEP, EXTREMELY BOULDERY	MGE
431E	MARLOW-DIXFIELD ASSOC., STEEP, EXTREMELY BOULDERY	MGE
530D	HERMON-MONADNOCK-DIXFIELD COMPLEX, VERY HILLY, VERY STONY	HVE
530E	HERMON-MONADNOCK-DIXFIELD COMPLEX, VERY HILLY, VERY STONY	HVE
531D	MONADNOCK-HERMON-DIXFIELD COMPLEX, VERY HILLY, EXTREMELY BOULDERY	MXE
531E	MONADNOCK-HERMON-DIXFIELD COMPLEX, VERY HILLY, EXTREMELY BOULDERY	MXE
620D	TUNBRIDGE-LYMAN-MARLOW COMPLEX, STRONGLY SLOPING	TWC
630E	LYMAN-SCHOODIC-ROCK OUTCROP COMPLEX, VERY HILLY, VERY STONY	LTE
900E	SCHOODIC-ROCK OUTCROP-LYMAN COMPLEX, VERY STEEP	SGE

